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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,901	03/21/2001	Petter Ericson	3782-0128P	1171

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EXAMINER

LE, THIEN MINH

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/812,901

Applicant(s)

ERICSON, PETTER

Examiner

Thien M. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/02; 4/02; 12/01; 01/01</u> | 6) <input checked="" type="checkbox"/> Other: <u>IDS 9/2001</u> |

DETAILED ACTION

As a preliminary matter, the examiner respectfully withdrawn the Final Rejection dated 4/6/2005 in light of the Interview conducted between applicant's representative, Mr. Chad Billings, and the previous examiner of record, Mr. Mark Tremblay. However, since the content of the interview as reviewed does not address all grounds of rejection set forth in the Office Action dated 4/6/2005, the examiner respectfully maintains the grounds of rejection on the claims.

Further, an updated search in light of the withdrawal of the Finality, the examiner has founded other new grounds of rejection and they are herein disclosed for applicant's further reviews.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

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directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 5-9 1 1-14, 16, 25-36 are rejected under 35 U.S.C.. 102(b) as being anticipated by U.S. Patent #6,419,162 to Petrie et al. (" '162 " hereinafter).

Petrie discloses a product which has a surface provided with an image in the form of a coding pattern which includes symbols representing at least two different values (col. 2, line 58), each symbol comprising a raster point (the glyphs are arranged in a two dimensional array) and at least one marking; the raster point being included in a raster which extends over the surface; at least one value of each symbol being indicated by a displacement of the at least one marking in relation to a raster point (e.g. the upper portion of the glyph is either to the right or left of the center of the glyph); and the markings each having a spatial extent which, in combination, at least partially form the image (see figures 8 and 9).

Re claims 1 1-13 and 33-35, Petrie is designed to encode all data, and that set includes the claimed limitations.

Re claim 14, any offset to the glyph raster could be considered a virtual raster.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 4 is rejected under 35 U.S.C. a 103 as being unpatentable over '162 in view of U.S. Patent #5,168,147 to Bloomberg ("Bloomberg" hereinafter). Petrie teaches the features of the invention as described above, but fails to teach a circular mark. Bloomberg teaches that a circular mark can be used as an alternative to a glyph. See figures 3 and 3a. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the circular marks taught by Bloomberg for the elongated glyphs taught by Petrie because Bloomberg teaches that circular glyphs can encode the information in a rotationally invariant manner.

Claims 17-24 and 37 are rejected under 35 U.S.C. a 103 as being unpatentable over '162 in view of U.S. Patent No. 5,864,127 to Jackson et al. ("Jackson" hereinafter).

Petrie teaches the features of the invention, and further suggests "overlapping markings", but fails to directly teach overlapping markings. Jackson et al. teach that glyph codes may be formed from markings comprising overlapping circular marks. It

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would have been obvious to one having ordinary skill in the art at the time the invention was made to use overlapping markings as taught by Jackson to form the image of the '162 patent because Jackson teaches that glyphs may be formed from a more elementary mark comprising overlapping circles. This is fundamental to those skilled in the art of printing.

Claims 10 and 15 are rejected under 35 U.S.C. a 103 as being unpatentable over '162 in view of U.S. Patent *,000,613 to Hecht et al. ("Hecht" hereinafter).

Petrie teaches the features of the invention, but does not teach more than a binary coding. Hecht et al. teach that a glyph can encode two bits in one of four positions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the Hecht scheme to encode two bits per glyph with the Petrie teaching because the Hecht scheme would increase the data density of the glyphs.

Claims 1-3, 5-9 1 1-14, 16, 25-36 and 38-41 are rejected under 35 U.S.C.. 102 as being anticipated by U.S. Patent #5,245, 165 to Zhang ("Zhang" hereinafter) either alone, or alternatively is rejected 35 U.S.C. a 103 as being unpatentable over Zhang in view of '162.

Zhang discloses a product which has a surface provided with an image in the form of a coding pattern which includes symbols 22a, 22b, 22c, and 22d, representing at least two different values (four values, in dual bits, see column 4, lines 1-10), each symbol comprising a raster point (see figure 5a-- the center of the cross hairs is the

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raster point) and at least one marking; the raster point being included in a raster which extends over the surface (see figure 2); at least one value of each symbol being indicated by a displacement of the at least one marking in relation to a raster point (e.g. the center of "mass" of each glyph is displaced about the central raster point); and the markings each having a spatial extent which, in combination, at least partially form the image (see figure 2). The collection of glyphs in Zhang's figure 2 can be described as an image, in the broadest reasonable sense of the word. It is not a very interesting image, but an image nonetheless. The closest Applicant comes to claiming what is shown in Applicant's figure 5c is claim 28. The term "picture" is hardly distinct from the term "image". Applicant has not put very much effort within the claims to define what is meant by these terms. They have ordinary meanings, and the ordinary meanings are broad.

Nevertheless, Examiner will consider the alternative, importing the understanding of what is shown in figure 5c into the understanding of the term "image" (even though the examiner maintains this is improper). However, it is immediately clear that the inventors at Xerox had contemplated that the code taught by Zhang could be used to form an image. They teach that many types of data glyphs can be used to form an image like that illustrated in Applicant's figure 5c, as evidenced by '162. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the data glyphs of Zhang

Response to Arguments

[Examiner thanks the Applicant for pointing out that Data Glyph is a trademarked term. However, the references also use the phrase "data glyph" as the Examiner uses the term].

Applicant has amended the claims and argued that the term "displacement" better defines over the '162 reference. The Examiner respectfully disagrees. The '162 reference discloses that a regularly spaced series of slanted lines may be used to encode data. The lines may be slanted left or right. '162 clearly shows that it is the center of these lines which are regularly spaced. The center of the lines forms a raster pattern of dots. The ends of these lines form a pattern of dots which is displaced from a normal position to encode the data. The normal position may alternately be considered the center of the line (the raster) or the position it would occupy if the line were strictly vertical. It does not matter, since the claims do not define over either interpretation.

In the case of claim 4, the placement of the circular mark at the center of the raster pattern would constitute a placement, and its removal to the perimeter of the location defined by its placement would constitute a displacement, or vice versa. In short, the Applicant's use of the term "displacement" vs placement hardly helps define over the prior art, since the "placement is only conceptual. There is no marking on the raster in, for example, Applicant's figure 2. It can be just as easily stated that the dots are placed in certain locations, or displaced in certain locations. Since the reference raster is not explicitly marked, it is more a matter of conception and interpretation whether marks are placed or displaced. In Petrie, by contrast, there is

most definitely a displacement of marks. An upper portion of a line, for example, is displaced to the upper right or upper left with respect to the center of the line. A lower portion of the line is displaced to the lower right or lower left of the center of the line. The Applicant argues that the combination of '162 and Jackson fails to teach the recited overlapping marks. This aspect of the invention appears to be best illustrated in Applicant's figures 6a and 6b. The Applicant states that the individual dots do not represent the glyph, but instead the combination of dots represent a glyph in Jackson. The Examiner respectfully disagrees with Applicant's line of reasoning. What Jackson shows is a glyph comprised of three parts, a center, reference dot, which is uniformly spaced (the raster dot), and two outlying dots which are displaced right or left with respect to the raster. These dots overlap because of the printing process. In '162, including some of the patents incorporated by reference into '162, variations in glyph size are used to encode pictographic information, such as a face (see figure 9). This is done by thickening or thinning the glyph selectively. As seen in figure 9, portions of the darker regions of glyphs seem to touch each other. Jackson was cited to show that, as part of the printing process, where regions touch each other, such regions overlap.

The Examiner notes that US #6,419,162 incorporates by reference:

US Patent #5,939,703

US Patent #5,862,271

US Patent #5,572,010

US Patent #5,449,896

US Patent #5,453,605

US Patent #5,315,098

US Patent #5,710,636

and US Patent #6,341,730.

In turn, US Patent #5,453,605 incorporates by reference:

US Patent #5,344,450

US Patent #5,168,147

US Patent #5,128,525

and US Patent #5,091,966.

US Patent #5,710,636 incorporates by reference:

US Patent #6,000,613

and US Patent #5,706,099.

US Patent #6,000,613 incorporates by reference:

US Patent #6,076,738

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien M. Le whose telephone number is (571) 272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Le, Thien Minh
Primary Examiner
Art Unit 2876
September 7, 2005